Having thus described the preferred embodiment, the invention is now claimed:

1. A housing assembly for enclosing and storing cable splices comprising:

first and second end plates axially aligned and spaced apart from one another;

first and second housing members releasably and sealingly clamped to each other, said housing members enclose said end plates, said end plates being located at opposite ends of said housing members;

wherein said housing members are symmetrical with respect to each other;

a sealing member extending along a length of said housing members and located along a longitudinal edge of at least one of said housing members;

end plate seal members embedded into grooves at opposing ends of seal housing members; and,

third and fourth housing members interchangable with said first and second housing members, said third and fourth housing members being releasably and sealingly clamped to each other, said third and fourth housing members enclose said end plates and are symmetrical to each other.

2. The housing assembly of claim 1, further comprising a rigid bar member having opposite terminal ends joined to the first and second end plates to hold them in their axially aligned and spaced relationship.

3. The housing assembly of claim 1, wherein each of said first and second housing members includes a plurality of rib elements extending from an exterior surface of said housing member to form a support for permitting said housing member to rest stably on a flat work surface.

4. The housing assembly of claim 1, wherein each of said first and second housing members comprises a main body portion with peripheral clamping flanges extending outwardly therefrom and cooperatively positioned in opposed relationship to another of said housing members to be clamped together, said clamping flanges have inner end portions adjacent said main body portions and having free outer end portions.

5. The housing assembly of claim 4, wherein said sealing member is positioned between said inner end portions of said clamping flanges, and is bonded into said inner end portions along a longitudinal axis of said first and second housing members.

6. The housing assembly of claim 1, wherein said first and second housing members each comprise an injection molded shell.

7. The housing assembly of claim 1, wherein said third and fourth housing members each comprise a stainless steel shell.

8. The housing assembly of claim 1, wherein at least one of said first and second housing members comprises an alignment rib extending along said longitudinal axis of said housing member.

9. The housing assembly of claim 5, further comprising a gasket extending along said longitudinal axis of one of said first and second housing members, said gasket being connected to said end plate seal members.

10. The housing member of claim 9, wherein said gasket is recessed within a groove along said longitudinal axis of said first housing member, said gasket being

located on a first side of said first housing member, said sealing member being located along a second side of said first housing member.

11. The housing member of claim 10, wherein said second housing member carries said seal member located on a first side of said second housing member and a gasket recessed within a groove along a second, opposite side of said second housing member, wherein said gasket of said first housing member and said seal member on said second housing member are compressed together to form a seal, and wherein said seal member of first housing member and said gasket of said second housing member are compressed together to form a seal.

12. The housing assembly of claim 11, wherein said gasket comprises neoprene rubber.

13. The housing assembly of claim 11, further comprising a plurality of tabs protruding from said first and second sides of each housing member along said longitudinal axis.

14. The housing assembly of claim 13, further comprising first and second retention members including a plurality of slotted openings adapted to align with said tabs when the first and second housing members are brought together to an intermated connected position, said retention members clamping said first and second housing members together.

15. The housing assembly of claim 14, wherein each of said retention members includes a pair of members each having a plurality of slotted openings and a plurality of fastening means to secure said pair of slotted members to each other.

16. The housing assembly of claim 15, wherein said slotted members are generally parallel to each other.

17. The housing assembly of claim 16, further comprising a spacer which is compressed between said pair of slotted members to transfer a uniform load along said longitudinal axes of said housing members.

18. The housing assembly of claim 16, wherein said retaining members are outboard of said clamping flanges of said housing members.

19. The housing assembly of claim 1, further comprising a filling flange attached to an outside surface of one of said housing members.

20. The housing assembly of claim 19, wherein said filling flange is spin welded to said housing member.

21. The housing assembly of claim 19, wherein said filling flange includes a cap and an air valve sealed by said cap.

22. The housing assembly of claim 19, wherein said filling flange includes a cap and a check valve for injecting encapsulant to said housing, said valve being sealed by said cap.

23. The housing assembly of claim 19, wherein said filling flange includes a cap and a grounding plug secured within said cap for accommodating a grounding wire.

24. The housing assembly of claim 1, wherein said end plates each include fastening means located within said end plates.

25. The housing assembly of claim 24, wherein said end plates define at least one hole for cable insertion.

26. The housing assembly of claim 24, wherein said end plate fastening means comprises a nut strip which distributes loads required to draw end plate sections together to fasten said end plate sections to each other.

27. The housing assembly of claim 1, further comprising an air and grounding insert molded into an opening within each of said end plates for connecting an associated air valve and grounding insert to said housing.

28. The housing assembly of claim 1, wherein said end plates each include at least one gripping member comprising teeth for gripping cable and a slotted elongated member which extends to accommodate cables of varying widths.

29. The housing assembly of claim 24, wherein said end plates comprise varying outer diameters to accommodate housing members of varying sizes.

30. An end seal washer assembly for use with a cable closure, comprising:

a first washer including a disk having a first side and a second side, said first side having a plurality of ribs extending radially outward from the center portion of said washer, said second side having a flat surface; and,

a second washer including a disk having a first side and a second side, said first side having a flat surface, said second side having a plurality of ribs extending radially outward from the center portion of said second washer, said first washer and second washer being symmetrical with respect with each other.

31. The end washer of claim 30, wherein:

said first washer further includes holes spaced apart along a peripheral edge of said first washer; and,

said second washer includes tabs spaced apart along a peripheral edge of said second washer, said tabs engaging said holes to secure said first washer to said second washer.

32. The washer of claim 30, wherein said second side of said first washer and said first side of said second washer each include a plurality of sections with grooves and reference labels adjacent said grooves for determining which grooves will be cut.

33. The washer of claim 30, wherein said grooves of one of said washers are adapted to matingly engage solid wall sections of the other of said washers.

34. The washer of claim 30, wherein said first washer and said second washer are formed of thermoplastic.

35. The washer assembly of claim 30, further comprising a third washer including a disk having a first side and a second side, said first side having a plurality of ribs extending radially outward from the center portion of said washer, said second side having a flat surface.

36. The washer assembly of claim 35, further including a fourth washer comprising a disk having a first side and a second side, said first side having a flat surface, said second side having a plurality of ribs extending radially outward from a center portion of said second washer, said third washer and said fourth washer being symmetrical with respect to each other.

37. The washer assembly of claim 36, further comprising a spool which extends through center openings of said washer and connects said first and second washers to said third and fourth washers.

38. The washer assembly of claim 37, wherein said first and second washer and said third and fourth washer are adapted for assembly in a single orientation.

39. The washer assembly of claim 32, wherein said grooves provide a path for cutting an opening through each of said washers.

40. The method of measuring an outer diameter of cable prior to insertion through a seal washer, comprising:

inserting said cable through a pair of seal washers;

applying a layer of tape around an outer diameter of said cable;

applying a layer of sealant on the said cable and said tape until an outer diameter of said sealant is at least equivalent to an outer diameter of seal washers;

wrapping a measuring tape around said sealant; and,

using index lines of said tape to measure the amount of sealant applied to said cable.

41. A portable washer cutter for cutting an internal cut out from a flat washer, the washer cutter comprising:

first and second enclosures adapted to cooperatively engage together to cut a circular internal cut-out from an associated flat washer;

said first enclosure comprises an internal cavity with a cutting member secured thereto;

said second enclosure comprises a supporting structure for said washer;

said first and second enclosures being connected via

an axle extending through an opening of said first and second enclosure;

said cutting member being radially adjustable between a first position adjacent an outer perimeter of said first enclosure to a second position adjacent a center axis of said first enclosure;

said first enclosure having a plurality of radial grooves extending from said central axis of said enclosure to said perimeter of said enclosure; and,

said second enclosure having a plurality of ribs extending radially outward from said center axis of said second enclosure, said ribs being located on a first side and a second side of said second enclosure.

42. The washer cutter of claim 41, wherein said ribs vary in height from a first height to a second height, wherein said second height is greater than said first height, wherein ribs of said first height space said associated washer from a surface of said second enclosure and ribs of a second height engage spokes of said washer to prevent rotation of said washer when mounted on said second enclosure.

43. The washer cutter of claim 41, wherein said first and second enclosures are made from injection molded plastic.

44. The washer cutter of claim 41, wherein said ribs of greater height extend through an open portion of said washer to prevent rotation.

45. The washer cutter of claim 43, wherein said ribs of greater height are spaced apart in a radial direction to accommodate washers of varying diameters.

46. The washer cutter of claim 45, wherein said

first side of said second enclosure accommodates washers of three different outer diameters, and said second side of said second enclosures accommodates washers of two different outer diameters.

47. The washer cutter of claim 41, wherein said second enclosure further comprises a plurality of extensions extending from a peripheral edge of said enclosure, each of said extensions comprises a detachably secured positioning member.

48. The washer cutter of claim 47, wherein said extensions serve as hand grips during use of said cutter.

49. The washer cutter of claim 48, further comprising a positioning member secured to said first side of said second enclosure and positioning member secured to said second side of said enclosure.

50. The washer cutter of claim 49, wherein said second enclosure comprises a plurality of holes for accommodating said detachable positioning members.

51. The washer cutter of claim 49, wherein one of said positioning members is detached from one of said extensions is positioned within one of said openings in said second enclosure.

52. The washer cutter of claim 51, wherein said positioning members engage slots within said washers.

53. The washer cutter of claim 50, wherein one of said extensions comprises a hole to store a positioning member after being detached from one of said extensions.

54. The washer cutter of claim 53, wherein said

extensions are semi-circular.

55. The washer cutter of claim 41, wherein said second enclosure further comprises an alignment rib on a first surface and a second surface of said enclosure.

56. The washer cutter of claim 55, further comprising an alignment groove on said first enclosure, said groove lines up with said alignment ribs of said second enclosure for proper positioning of said cutting member.

57. The washer cutter of claim 41, wherein said first enclosure further comprises a handle ergonomically shaped to approximate the shape of a user's hand.

58. The washer cutter of claim 57, wherein said cutting member comprises an elongated member having a slot therethrough and a blade positioned at one end of said elongated member.

59. The washer cutter of claim 58, wherein said cutting member further comprises a threaded member extending through a hole in said first enclosure and through said slot of said elongated member.

60. The washer cutter of claim 59, wherein said blade is moved to a location indexed by an index marking on said first enclosure and is secured into place by tightening said threaded member.

61. The washer cutter of claim 60, wherein said elongated member further comprises grooves which align with ribs in said second enclosure.

62. The washer cutter of claim 61, wherein said

grooves of said first enclosure provide clearance for tabs on said washers.

63. The washer cutter of claim 56, wherein said first enclosure is aligned with said second enclosure by aligning said alignment rib in said groove, wherein said first enclosure is placed onto said second enclosure and is rotated 360° to cut said washer.

64. A plug for sealing an end plate opening, comprising:

a first ring;

a second ring spaced apart from said first ring;

a spool connecting said first ring to said second ring, wherein each of said first and second rings comprise a groove extending around a perimeter of said rings, said groove divides each of said rings into an outer diameter ring and an inner diameter ring, wherein said outer diameter rings are removable from said inner diameter rings.

65. The plug of claim 64, wherein each of said outer diameter rings has a greater diameter than said inner diameter rings.

66. The plug of claim 64, wherein said outer diameter ring is separated from said inner diameter ring by applying a force to said outer diameter ring.

67. The plug of claim 64, wherein sealant is applied to an outer diameter of said spool until said outer diameter of said spool approximates the outer diameter of said first and second rings.

68. A hanging clip for suspending cable closure shells during use, comprising:

a body portion;

a first member extending from said body portion;

a second member extending from said body portion, wherein said first member and said second member are spaced apart;

a third member extending from said body portion for providing a grip for a user's hand; and,

at least one slot for receiving a tie wrap, said slot located within said body portion.

69. The hanging clip of claim 68, wherein said first member comprises a snap finger which engages an exterior rib of an associated closure shell.

70. The hanging clip of claim 68, wherein said second member comprises a locator rib which contacts an interior surface of an associated closure shell.

71. The hanging clip of claim 68, wherein said first and second members are generally parallel to each other.

72. The hanging clip of claim 68, wherein said third member comprises a finger grip which is adjacent to said first member.

73. The hanging clip of claim 68, further comprising a second slot generally perpendicular to and intersecting said first slot.

74. The hanging clip of claim 68, wherein said clip is installed on said closure shell by applying a force to said hanging clip via said third member, separating said first and second members from each other to engage a rib on said associated closure shell.

75. The plug of claim 64, wherein a tie wrap is

inserted through said slot and is tied to an associated cable to suspend said closure shell from said cable.